AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) A method for establishing communication in a network comprising:

determining communication data of a first network peer that is connected to a first network and that communicates with an internetwork through ~~at~~ a first tunnel, the communication data including an internetwork address and port for the first network peer to receive messages via the internetwork;

registering the communication data with a lookup service that is available through the internetwork;

receiving a communication request from a second network peer that is connected to a second network and that communicates ~~at~~ with the lookup service through the internetwork;

providing the communication data of the first network peer to the second network peer; and

sending messages, according to the communication data, from the second network peer directly to the first network peer via the first tunnel.

2. (currently amended) The method of claim 1 wherein communication data further comprises ~~is~~ at least one of ~~a communication address,~~ firewall restrictions and, a tunnel protocol~~, and a port~~.

3. (original) The method of claim 1 further comprising authenticating the communication request at the lookup service.

4. (original) The method of claim 3 wherein the communication request includes a certificate indicative of the second network peer.

5. (original) The method of claim 4 wherein authenticating the communication request includes providing a tunnel identifier to the second network peer in response to the certificate.

6. (original) The method of claim 2 further comprising creating a message queue for the first network peer.

7. (currently amended) The method of claim ~~7~~ 6 further comprising adding the communication request to the message queue.

8. (original) The method of claim 7 wherein the message queue is a proxy queue.

9. (original) The method of claim 7 wherein creating the message queue includes creating the message queue at a server remotely located from the first network peer.

10. (original) The method of claim 7 wherein creating the message queue includes creating the message queue at a location of the lookup service.

11. (original) The method of claim 7 further comprising tracking the location of the message queue at the lookup service.

12. (original) The method of claim 1 wherein the second network peer includes a second tunnel.

13. (cancelled)

14. (currently amended) A method for dynamically selecting a tunnel protocol in a network comprising:

determining protocol data of a first network peer that is connected to a first network and that communicates with an internetwork through ~~at~~ a first tunnel;

registering the protocol data with a lookup service that is available through the internetwork;

receiving a communication request from a second network peer at the lookup service;

providing the protocol data of the first network peer to the second network peer~~.~~;

selecting a tunnel protocol at the second network peer according to the protocol data; and

sending a message from the second network peer to the first network peer according to the tunnel protocol.

15. (original) The method according to claim 14 further comprising:

selecting a second tunnel protocol at the second network peer; and

sending a second message from the second network peer to the first network peer according to the second tunnel protocol.

16. (currently amended) A lookup service in a network comprising:

a first tunnel module that acquires communication data of an associated ~~a~~ network peer that is connected to a first network, wherein the first tunnel module facilitates communication between the network peer and an internetwork;

a registration table that stores the communication data and that is accessible via the internetwork; and

a second tunnel module that sends a communication request to the registration table, acquires the communication data from the registration table, and sends a communication attempt to the first tunnel based on the communication data.

17. (original) The lookup service according to claim 16 further comprising a discovery module that acquires the communication data.

18. (original) The lookup service according to claim 16 further comprising a registration module that registers the communication data with the registration table.

19. (original) The lookup service according to claim 16 wherein the communication data includes at least one of a logic name, a unique identifier, a communication address, a port, a communication protocol, and service capabilities.

20. (original) The lookup service according to claim 16 wherein the communication request includes a certificate indicative of the second tunnel module.

21. (original) The lookup service according to claim 20 wherein the registration table sends a tunnel identifier to the second tunnel in response to the certificate.

22. (original) The lookup service according to claim 21 wherein the communication attempts includes the tunnel identifier.

23. (original) The lookup service according to claim 22 wherein the first tunnel verifies the tunnel identifier with the registration table and accepts the communication attempt.

24. (original) The lookup service according to claim 16 wherein the first and second tunnels include a cache.

25. (original) The lookup service according to claim 24 wherein the cache stores the communication data.

26. (original) The lookup service according to claim 25 wherein the cache retrieves the communication data from the registration table.

27. (original) The lookup service according to claim 16 further comprising a message queue.

28. (original) The lookup service according to claim 27 wherein the message queue is a proxy queue.

29. (original) The lookup service according to claim 27 wherein the message queue stores communication attempts.

30. (original) The lookup service according to claim 27 wherein the message queue is located remotely from the network peer.

31. (original) The lookup service according to claim 27 wherein the message queue is located at the first tunnel module.

32. (original) The lookup service according to claim 27 wherein the message queue is located at the second tunnel module.

33. (original) The lookup service according to claim 27 further comprising a message queue server that creates the message queue.

34. (original) The lookup service according to claim 33 wherein the message queue server creates the message queue at a request from the network peer.

35. (original) The lookup service according to claim 27 wherein the registration table stores a location of the message queue.

36. (original) The lookup service according to claim 19 wherein the second tunnel module selects a tunnel protocol for the communication attempt according to the communication protocol.